

What is claimed is:

1. A method of controlling processing of stream data communicated in a multicast mode, the processing being conducted by a certain terminal of a plurality of terminals
5 having the same multicast address, the method comprising the steps of:

receiving a request for division into groups, the request indicating which one or more other terminals belong to the same group; and

10 performing either one of selective reception and selective replay of stream data issued from only the one or more other terminals belonging to the same group in accordance with the request, the stream data being simultaneously transmitted through a communication network to the plurality of terminals
15 having the same multicast address.

2. The method of claim 1, wherein the performing step is a step of selectively receiving the stream data issued from only the one or more other terminals belonging to the same group.

20 3. The method of claim 1, wherein the performing step is a step of selectively replaying the stream data issued from only the one or more other terminals belonging to the same group.

25 4. A method of controlling a flow of stream data in a multicast system in which a plurality of terminals all having the same multicast address are mutually connected communicably in a multicast mode through a communication network and a certain terminal serves as a host terminal and the remaining
30 terminals serve as client terminals, the method comprising the steps of:

making the host terminal divide the plurality of terminals to a plurality of groups of terminals in response to a division request;

making the host terminal transmit information about a plurality of divided groups to the client terminals having the same multicast address, each of the client terminals recognizing one or more terminals belonging to the same divided group; and

making each of the client terminals perform either one of selective reception and selective display of stream data issued from only the one or more terminals belonging to the same divided group, the stream data being simultaneously transmitted through the communication network to the plurality of terminals having the same multicast address.

5. A terminal distributed, together with other terminals, to form a plurality of terminals to which the same multicast address is given, through a communication network in a multicast system in which stream data are transmitted through the communication network in a multicast mode, the terminal comprising:

request receiving means for receiving a request for division into groups, the request including information indicating that the terminal belongs to which group;

producing means for producing, in response to the request, only the stream data coming from one or more other terminals belonging to the same group as the terminal; and

replaying means for replaying only the stream data produced by the producing means.

6. The terminal of claim 5, wherein the multicast system is a multicast conferencing system for a multicast conference, in which the terminal serves as one of a plurality of conference terminals.

7. The terminal of claim 6, wherein the producing means includes:

data receiving means for selectively receiving only the stream data coming from the one or more other terminals indicated by the request among the stream data coming from the other conference terminals having the same multicast address;

5 and

scene re-writing means for re-writing the selectively received stream data into a scene description on the basis of scene descriptions making correspondence between layout information to be displayed and the stream data, and

10 the replaying means is configured to replay the stream data according to both of the stream data selectively received by the receiving means and the scene description re-written by the scene re-writing means.

15 8. The terminal of claim 6, wherein the producing means includes:

data receiving means for receiving the stream data from the other conference terminals having the same multicast address; and

20 scene re-writing means for selectively re-writing only the stream data into a scene description on the basis of scene descriptions making correspondence between layout information to be displayed and the stream data, the stream data to be re-written coming from the one or more other terminals indicated by the request among the stream data coming from the other conference terminals having the same multicast address, and

25 the replaying means is configured to selectively replay the stream data received by the receiving means in accordance with the scene description re-written by the scene re-writing means.

30 9. The terminal of claim 6, further comprising deciding means for arbitrarily deciding a plurality of divided groups of terminals among the plurality of terminals all having the

same multicast address; and

issuing means for issuing the request, based on the plurality of groups decided, to the request receiving means and the other terminals all having the same multicast address.

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10. The terminal of claim 9, wherein the producing means includes:

data receiving means for selectively receiving only the stream data coming from the one or more other terminals indicated by the request among the stream data coming from the other conference terminals having the same multicast address; and

scene re-writing means for re-writing the selectively received stream data into a scene description on the basis of scene descriptions making correspondence between layout information to be displayed and the stream data, and

the replaying means is configured to replay the stream data according to both of the stream data selectively received by the receiving means and the scene description re-written by the scene re-writing means.

11. The terminal of claim 9, wherein the producing means includes:

data receiving means for receiving the stream data from the other conference terminals having the same multicast address; and

scene re-writing means for selectively re-writing only the stream data into a scene description on the basis of scene descriptions making correspondence between layout information to be displayed and the stream data, the stream data to be re-written coming from the one or more other terminals indicated by the request among the stream data coming from the other conference terminals having the same multicast address, and the replaying means is configured to selectively replay

the stream data received by the receiving means in accordance with the scene description re-written by the scene re-writing means.

5 12. The terminal of claim 7, wherein the scene description consists of layout information composed of sizes and positions of windows for replaying video data included in the stream data and media information composed of information about identifying the stream data to be replayed, and

10 the replaying means includes scene changeover means for selectivity changing over only the layout information in response to the re-written scene description so that only the stream data coming from the one or more other terminals belonging to the same group are replayed.

15 13. The terminal of claim 7, wherein the scene description consists of layout information composed of sizes and positions of windows for replaying video data included in the stream data and media information composed of information about identifying the stream data to be replayed, and

20 the replaying means includes scene changeover means for selectivity changing over only the media information in response to the re-written scene description so that only the stream data coming from the one or more other terminals belonging to the same group are replayed.

25 14. The terminal of claim 13, wherein the replaying means includes means for changing a layout of the windows to be displayed by moving in position the windows responsively to a user's operation.

30 15. A multicast conferencing system in which a plurality of conference terminals all having the same multicast address are mutually connected communicably in a multicast mode through

a communication network, the system comprising:

a single host conference terminal designated in the plurality of conference terminals, including:

first request receiving means for receiving a request for division into groups, the request including information indicating that the terminal belongs to which group;

first producing means for producing, in response to the request, only the stream data coming from one or more other terminals belonging to the same group as the terminal;

first replaying means for replaying only the stream data produced by the first producing means;

deciding means for arbitrarily deciding a plurality of divided groups of terminals among the plurality of terminals all having the same multicast address; and

issuing means for issuing the request, based on the plurality of groups decided, to the first request receiving means and client conference terminals all having the same multicast address, and

a plurality of remaining client conference terminals, each including:

second request receiving means for receiving the request for division into groups;

second producing means for producing, in response to the request, only the stream data coming from one or more other terminals belonging to the same group as the terminal; and

second replaying means for replaying only the stream data produced by the second producing means;

16. The multicast conferencing system of claim 15, wherein each of the first and second producing means includes:

data receiving means for selectively receiving only the stream data coming from the one or more other terminals indicated by the request among the stream data coming from the other conference terminals having the same multicast address;

and

scene re-writing means for re-writing the selectively received stream data into a scene description on the basis of scene descriptions making correspondence between layout information to be displayed and the stream data, and

the replaying means is configured to replay the stream data according to both of the selectively received stream data and the re-written scene description.

17. The terminal of claim 15, wherein each of the first and second the producing means includes:

data receiving means for receiving the stream data from the other conference terminals having the same multicast address; and

scene re-writing means for selectively re-writing only the stream into a scene description on the basis of scene descriptions making correspondence between layout information to be displayed and the stream data, the data to be re-written coming from the one or more other terminals indicated by the request among the stream data coming from the other conference terminals having the same multicast address, and

the replaying means is configured to selectively replay the stream data received in accordance with the re-written scene description.

18. A recording medium which is readable by a computer and in which information about a method of controlling processing of stream data communicated in a multicast mode is recorded, the processing being conducted by a certain terminal of a plurality of terminals having the same multicast address, the method comprising the steps of:

receiving a request for division into groups, the request indicating which one or more other terminals belong to the same group; and

performing either one of selective reception and selective replay of stream data issued from only the one or more other terminals belonging to the same group in accordance with the request, the stream data being simultaneously transmitted through a communication network to the plurality of terminals having the same multicast address.

19. A computer-readable program for controlling processing of stream data communicated in a multicast mode, the processing being conducted by a certain terminal of a plurality of terminals having the same multicast address, the program realizing the steps of:

receiving a request for division into groups, the request indicating which one or more other terminals belong to the same group; and

performing either one of selective reception and selective replay of stream data issued from only the one or more other terminals belonging to the same group in accordance with the request, the stream data being simultaneously transmitted through a communication network to the plurality of terminals having the same multicast address.